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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,597	02/23/2004	Adisorn Emongkonchai	6518P004	3223

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EXAMINER
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CURS, NATHAN M

ART UNIT	PAPER NUMBER
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2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/785,597

Applicant(s)

EMONGKONCHAI, ADISORN

Examiner

Nathan Curs

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                     |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                         | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/05, 7/05</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 8, 16 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 8 recites the limitation "wherein the signaling is performed without converting optical signals of the first unidirectional path to electrical signals", claim 16 recites the limitation "wherein the detection module signals the first terminating node without converting the respective optical signals of the first unidirectional path to electrical signals", and claim 24 recites the limitation "wherein the signaling is performed without converting optical signals of the first unidirectional path to electrical signals". However, the signaling is disclosed as being based on detecting a LOS condition of the first unidirectional path, where LOS is defined as "loss of optical signals or loss of light" (specification paragraph 0026). The specification does disclose how a LOS condition could be detected all optically, without a photodetector of some kind to detect the loss of light, a photodetector being both a component that produces electrical signals from optical signals.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 and depending claim 23 recite "the network of claim 1" and "the network of claim 22", respectively. However, while claim 1 mentions a network, it is a method claim, whereas claim 17 is claimed as a network. It's not clear if claim 22 properly depends from claim 1 or if it is supposed to depend from claim 17.

Claim 22 recites the limitation "the access node". There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5, 7, 9-13, 17-21, 25 and 26 are rejected under 35 U.S.C. 102(a) as being anticipated by ITU-T G.664 ("G.664") (*Optical safety procedures and requirements for optical transport systems*. ITU-T Recommendation 6.664 [online]. International Telecommunication Union, March 2003 [retrieved on 2007-01-18]. Retrieved from the Internet: <URL: <http://www.itu.int/rec/T-REC-G.664/en>>).

Regarding claim 1, G.664 discloses a method performed by a node of a wavelength multiplex optical network, the method comprising: detecting at a node that at least a portion of a

first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node; and signaling the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional path of the optical circuit, to indicate a path between the node and the first terminating node is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 2, G.664 discloses the method of claim 1, wherein the first terminating node is notified of the detection by not receiving at least a portion of the light of the second unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 3, G.664 discloses the method of claim 1, wherein the first unidirectional path is detected based on a loss of at least a portion of light of the first unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 4, G.664 discloses the method of claim 1, further comprising: detecting a wavelength of the first unidirectional path (first path/wavelength) is down; and signaling the first terminating node via a second path/wavelength of the second unidirectional path with respect to the status of the first path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 5, G.664 discloses the method of claim 4, wherein the first path/wavelength is detected based on a loss of light of the first path/wavelength, and wherein the first terminating node is notified by not receiving the light of the second path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 7, G.664 discloses the method of claim 1, wherein the first and second unidirectional paths are within different fibers (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 9, G.664 discloses an apparatus, comprising: a node to be coupled to a wavelength division multiplex optical network, the node including, a detection module to detect that at least a portion of a first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node, and a control module coupled to the detection module to signal the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional path of the optical circuit, to indicate that a path between the node and the first terminating node is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 10, G.664 discloses the apparatus of claim 9, wherein the first terminating node is notified of the detection by not receiving at least a portion of light of the second unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 11, G.664 discloses the apparatus of claim 9, wherein the first unidirectional path is detected based on a loss of at least a portion of light of the first unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 12, G.664 discloses the apparatus of claim 9, wherein the detection module detects a wavelength of the first unidirectional path (first path/wavelength) is down, and wherein the control module signals the first terminating node via a second wavelength of the second unidirectional path (second path/wavelength) with respect to the status of the first path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 13, G.664 discloses the apparatus of claim 12, wherein the first path/wavelength is detected based on a loss of light of the first path/wavelength, and wherein the first terminating node is notified by not receiving the light of the second path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 17, G.664 discloses a wavelength multiplex optical network, comprising: a plurality of nodes interconnected via one or more links, each of the plurality of nodes to detect node that at least a portion of a first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node, and signal the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional path of the optical circuit, to indicate a path between the respective node and the first terminating node is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 18, G.664 discloses the network of claim 17, wherein the first terminating node is notified of the detection by not receiving at least a portion of the light of the second unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 19, G.664 discloses the network of claim 17, wherein the first unidirectional path is detected based on a loss of at least a portion of light of the first unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 20, G.664 discloses the network of claim 17, wherein the node further detects a wavelength of the first unidirectional path (first path/wavelength) is down, and signals the first terminating node via a second path/wavelength of the second unidirectional path with respect to the status of the first path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 21, G.664 discloses the network of claim 20, wherein the first path/wavelength is detected based on a loss of light of the first path/wavelength, and wherein the first terminating node is notified by not receiving the light of the second path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 25, G.664 discloses a method performed by a node of a wavelength multiplex optical network, the method comprising: detecting at a node that at least a portion of functionality of a wavelength of a first unidirectional path (first path/wavelength) of an optical circuit fails to operate, the first unidirectional path being originated from a first terminating node; and signaling the first terminating node by removing the light of a second wavelength a second unidirectional path (second path/wavelength) in an opposite direction of the first unidirectional path of the optical circuit, to indicate the failure of the first path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 26, G.664 discloses an apparatus, comprising: a node to be coupled to a wavelength division multiplex optical network, the node including, a detection module to detect that a wavelength of a first unidirectional path (first path/wavelength) of an optical circuit fails to perform, the first unidirectional path being originated from a first terminating node, and a control module coupled to the detection module to signal the first terminating node by removing a light of a second wavelength a second unidirectional path (second path/wavelength) in an opposite direction of the first unidirectional path of the optical circuit, to indicate the first path/wavelength is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

7. Claims 1, 6, 9, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwaki et al. ("Iwaki") (US Patent Application Publication No. 2002/0024690).

Regarding claim 1, Iwaki discloses a method performed by a node of a wavelength multiplex optical network, the method comprising: detecting at a node that at least a portion of a first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node; and signaling the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional



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path of the optical circuit, to indicate a path between the node and the first terminating node is down (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

Regarding claim 6, Iwaki discloses the method of claim 1, further comprising:  
determining whether the node is a terminating node of the optical circuit with respect to the first unidirectional path, wherein the signaling is performed only if the node is a terminating node of the optical circuit (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

Regarding claim 9, Iwaki discloses an apparatus, comprising: a node to be coupled to a wavelength division multiplex optical network, the node including, a detection module to detect that at least a portion of a first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node, and a control module coupled to the detection module to signal the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional path of the optical circuit, to indicate that a path between the node and the first terminating node is down (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

Regarding claim 14, Iwaki discloses the apparatus of claim 9, wherein the control module further determines whether the node is a terminating node of the first unidirectional path of the optical circuit, and wherein the control module signals the first terminating node only if the node is a terminating node of the optical circuit (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

Regarding claim 15, Iwaki discloses the apparatus of claim 14, wherein the first and second unidirectional paths are within different fibers (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

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**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- European Patent Office Publication No. 1003300 – discloses automatic laser shutdown and restart where restart control resides at the terminals.

9. Any inquiry concerning this communication from the examiner should be directed to N. Curs whose telephone number is (571) 272-3028. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached at (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (800) 786-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pairedirect.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Nathan Curs*  
1/22/07

*Hanh Phan*  
**HANH PHAN**  
**PRIMARY EXAMINER**